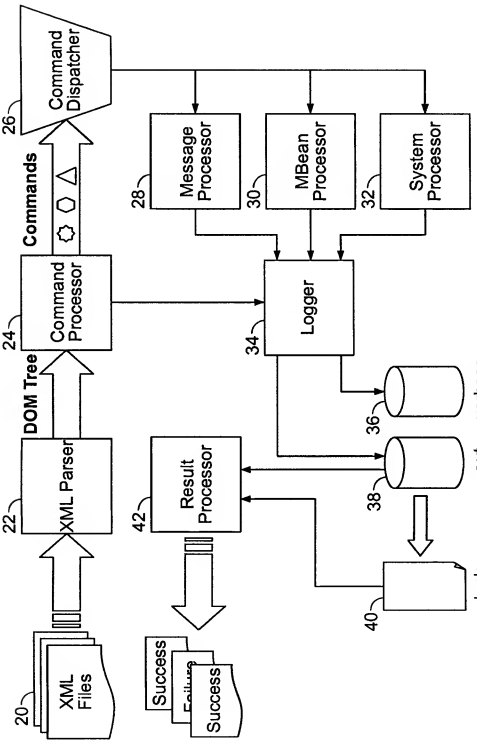
Command Dispatcher
26
Commands
Message Processor
28
MBean Processor
30
System Processor
32
Command Processor
24
Logger
34
DOM Tree
XML Parser
22
Result Processor
42
36
.verbose
38
.out
40
.bmk
20
XML Files
Success
Success

FIG. 1

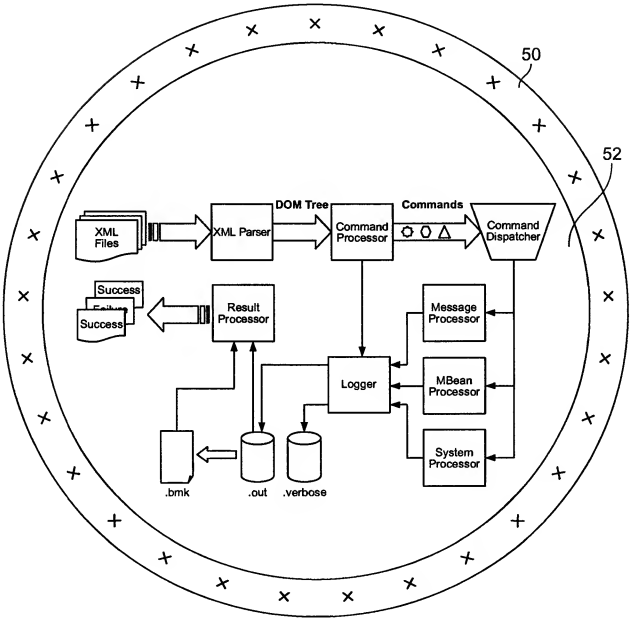
50
52
XML Files
XML Parser
DOM Tree
Command Processor
Commands
Command Dispatcher
Success
Success
Result Processor
Message Processor
Logger
MBean Processor
System Processor
.bmk
.out
.verbose

FIG. 2

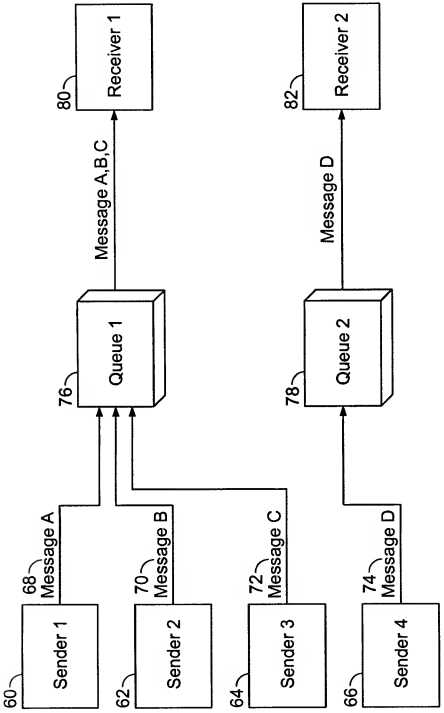
Receiver 1
80
Receiver 2
82
Message A,B,C
Message D
Queue 1
76
Queue 2
78
68
Message A
70
Message B
72
Message C
74
Message D
Sender 1
60
Sender 2
62
Sender 3
64
Sender 4
66

FIG. 3

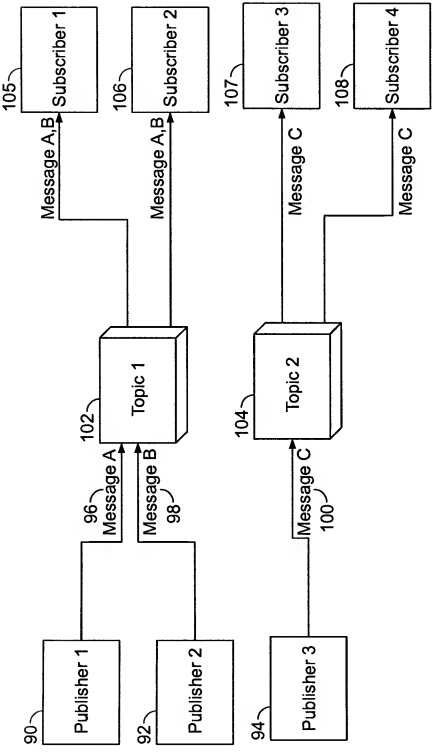
Publisher 1
90
Publisher 2
92
Publisher 3
94
96
Message A
Message B
98
Message C
100
Topic 1
102
Topic 2
104
Message A,B
Message A,B
Message C
Message C
Subscriber 1
105
Subscriber 2
106
Subscriber 3
107
Subscriber 4
108

FIG. 4

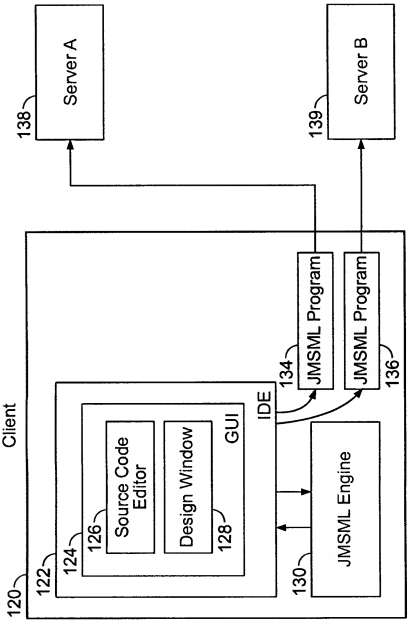
Server A
138
Server B
139
Client
120
122
124
126
Source Code Editor
Design Window
128
GUI
IDE
JMSML Engine
130
134
JMSML Program
136
JMSML Program

FIG. 5

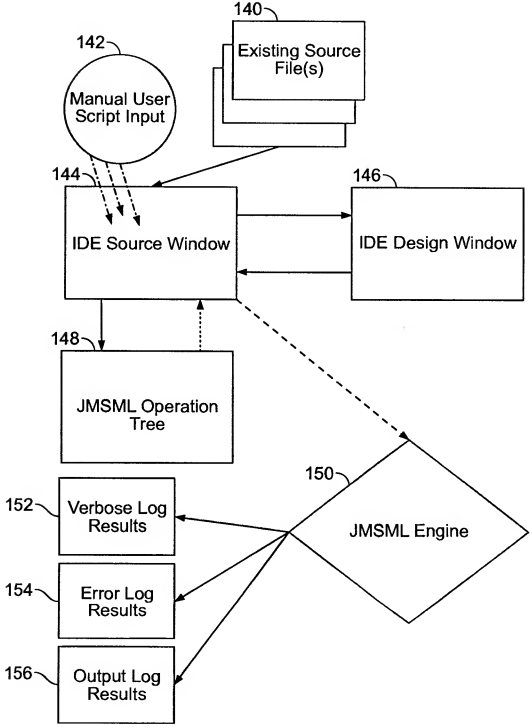
140
Existing Source File(s)
142
Manual User Script Input
144
IDE Source Window
146
IDE Design Window
148
JMSML Operation Tree
150
JMSML Engine
152
Verbose Log Results
154
Error Log Results
156
Output Log Results

FIG. 6

Title: SYSTEM AND METHOD FOR JAVA MESSAGE SERVICE MARK-UP LANGUAGE
Inventors: Kathiravan Sengodan
Application No.: 10/602,037 Filing Date: June 23, 2003
Docket No.: BEAS-01351US1
Attorney: Karl F. Kenna Telephone No. (415) 362-3800

FIG. 7

JMSML C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
JMS
Messages
Add CC
Add SSP
Add Dest
Add FE
Add BE
FieldName
Data
BytesThresholdHigh
1024000
BytesThresholdLow
1000000
BytesThresholdLow
4096
Class
mbean
DeliveryModeOverride
Persistent
JMSServer
Warehouse
JNDIName
jms.queue.order
MessagesMaximum
1000000
MessagesThresholdHigh
90000
MessagesThresholdLow
1000
Name
orderqueue
PriorityOverride
5
StoreEnabled
default
TimeToLiveOverride
7200000
Type
Queue
Add
List
JMSServer-Warehouse
Add
JMSQueue-orderqueue
Properties
Actions
Source
Design
[jmsml: null]
[scenario: null]
[scenario: null]
[scenario

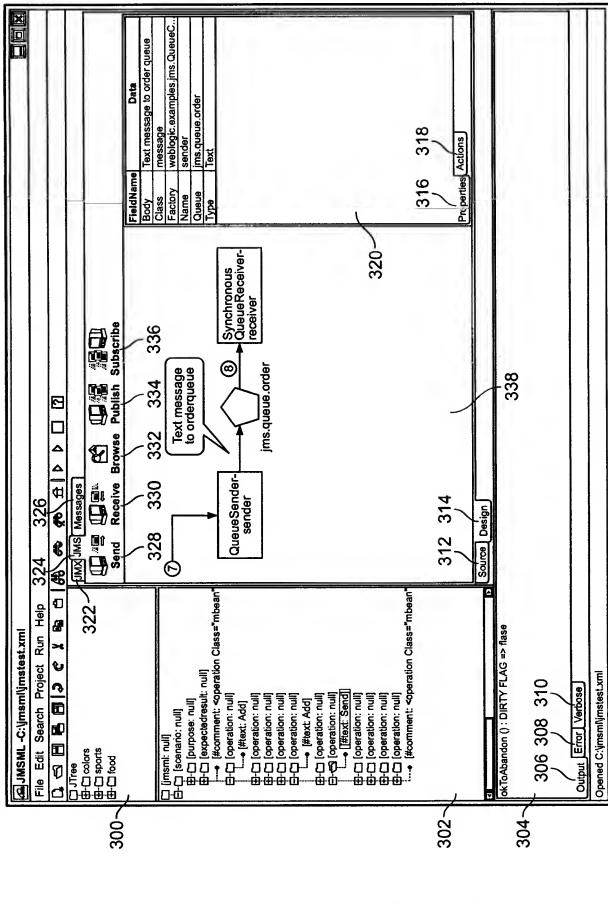
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
JMS
Messages
Send
Receive
Browse
Publish
Subscribe
QueueSender-sender
Text message to orderqueue
jms.queue.order
Synchronous QueueReceiver-receiver
FieldNames
Data
Body
Text message to order queue
Class
message
Factory
weblogic.examples.jms.QueueC...
Name
sender
Queue
jms.queue.order
Type
Text
Properties
Actions
Source
Design
okToAbandon () : DIRTY_FLAG => false
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
300
302
304
306
308
310
312
314
316
318
320
322
324
326
328
330
332
334
336
338

FIG. 9

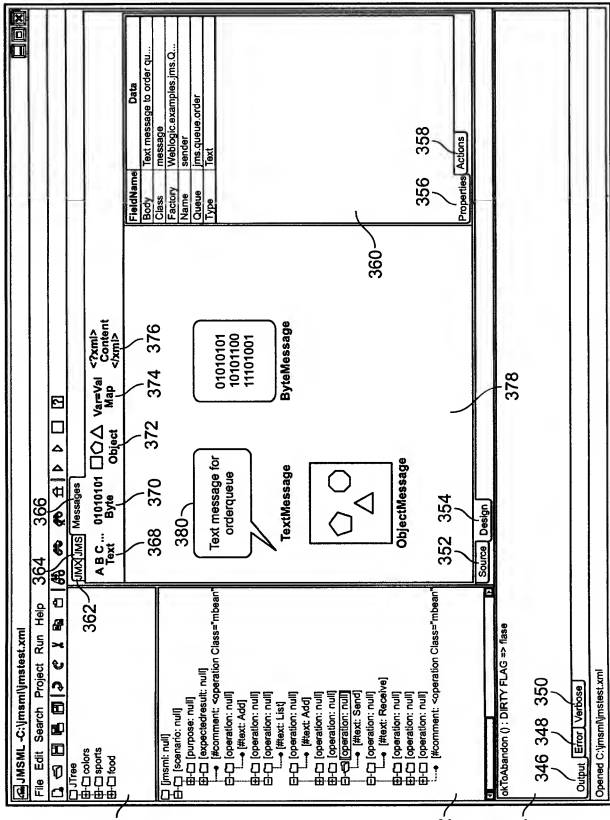
JMSHL -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
364
366
JTree
colors
sports
food
362
JMX JMS Messages
ABC... Text
01010101 Byte
Object
VarrVal Map
<Xml> Document <Xml>
368
370
372
374
376
380
Text message for orderqueue
TextMessage
01010101 10101100 11101001
ByteMessage
ObjectMessage
FieldName
Data
Body
Text message to order qu...
Class
message
Factory
Weblogic.examples.jms.Q...
Name
sender
Queue
jms.queue.order
Type
Text
360
356
358
Properties
Actions
352
354
Source
Design
378
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedResult: null]
[#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[#text: List]
[#text: Send]
[#text: Receive]
[#comment: <operation Class="mbean"
dirTyAbandon () : DIRTY FLAG => flase
340
342
344
346
348
350
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml

FIG. 10

JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
400
[jmsml: null]
[scenario: null]
[purpose: null]
[expectedresult: null]
[#comment: <operation Class="mbean"
[operation: null]
[#text: Add]
[operation: null]
[operation: null]
[operation: null]
[#text: List]
[operation: null]
[operation: null]
[#text: Send]
[operation: null]
[#text: Receive]
[operation: null]
[#text: Remove]
[operation: null]
[#comment: <operation Class="mbean"
<?xml version="1.0" encoding="UTF-8"?>
<!DOCTYPE jmsml PUBLIC "-//BEA Systems Inc//DTD JMSML Specification 1.0 JMSML//EN" "jmsml.dtd">
<jmsml>
<scenario Name="Dynamic Queue creation" Verify="false">
<purpose>
To test the dynamic creation of queue
</purpose>
<expectedresult>
JMS Queue destination should be successfully created with the specified atributes. In order to verify th
are two additional operations are done as below.
1. Take the statistics information of the JMSServer "Warehouse" before and after the creation of the queue destin
sea the newly created queue is been added the current destination count of the JMSServer "Warehouse".
2. A sender and receiver will be created to send and receive a text message to and from the newly created "order
If the above two operations are successful, the test is declared as PASSED. Otherwise the test is declared as FA
</expectedresult>
<operation Class="mbean" Name="Warehouse" Targets="examplesServer" Type="JMSServer">
Add
</operation>
<operation Class="mbean" Name="Warehouse" Type="JMSServer">
416
jmstest.xml
Line 1
Col 1
Opened
INS
Source
Design
412
414
Processing data file...C:\jmsml\jmstest.xml.xml
jmsml
<scenario
Text="scenario
Name="Dynamic Queue creation"
Verify="false"
404
<purpose
Unknown node: purpose
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
410
402
406
408

FIG. 11

JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
<?xml version="1.0" encoding="UTF-8"?>
jmstest.xml
Line:1
Col:1
Opened
JMS
Source
Design
<operation
Class="mbean"
Name="Warehouse"
Target="examples.JMSServer"
Target="JMSServer"
>
Add
User : null
Password : null
Release : 7.0
Console : false
Verbose : false
SaveConfig : false
TestCounterStart : -1
TestCounterEnd : -1
TestCounterStep : -1
SilentMode : false
SaveConfig : false
Destination : 1
Operation : 100
OperationClass : *
Count : Warehouse
ObjectName : JMSServer
ObjectType : null
MessageType : null
ListFilter :
Attribute[0] = Targets
Values[0] = examplesServer
Constructing the MBeanProcessor
Getting Initial Context weblogic.jndi.WLInitialContext@de5cd9
IC : javax.naming.InitialContext@ald92a
Broadcaster Name : [Caching Stub] Proxy for examples:Location=examplesServer,Name=TheLogBroadcaster,Type=LogBroadcasterRuntime
Broadcaster Name : [Caching Stub] Proxy for examples:Location=examplesServer,Name=TheLogBroadcaster,Type=LogBroadcasterRuntime
Server Name : examplesServer
Server Name : examplesServer
0 session pools are found
getting destinations from examples.JMSServer
0 destinations are found on examples.JMSServer
getting destinations from examples.JMSServer
5 destinations are found on examples.JMSServer
0 destination keys are found
Output
Error
Verbose
Opened C:\jmsml\jmstest.xml
420
422
434
436
430
438
432
428
424
426

FIG. 12

REPLACEMENT SHEET
Drawing Sheet 13 of 19
Title: SYSTEM AND METHOD FOR JAVA MESSAGE SERVICE MARK-UP LANGUAGE
Inventors: Kathiravan Sengodan
Application No.: 10/602,037 Filing Date: June 23, 2003
Docket No.: BEAS-01351US1
Attorney: Karl F. Kenna Telephone No. (415) 362-3800

FIG. 13

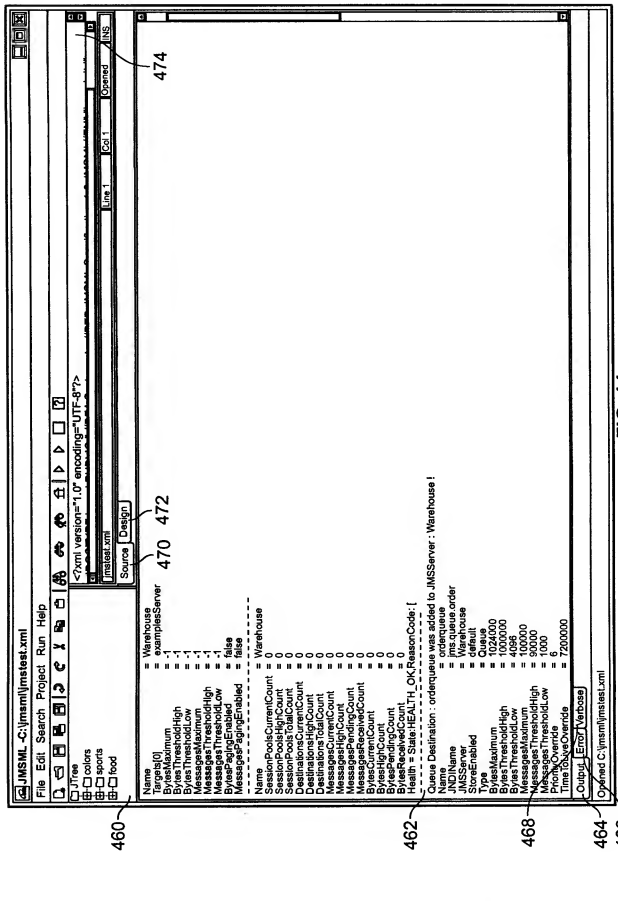
JMSML -C:\jmsml\jmstest.xml
File Edit Search Project Run Help
JTree
colors
sports
food
<?xml version="1.0" encoding="UTF-8"?>
jmstest.xml
Line 1
Col 1
Inserted
JMS
Source
Design
470
472
474
Name = Warehouse
Targets[0] = examplesServer
BytesMaximum = -1
BytesThresholdHigh = -1
BytesThresholdLow = -1
MessagesMaximum = -1
MessagesThresholdHigh = -1
MessagesThresholdLow = -1
BytesPagingEnabled = false
MessagesPagingEnabled = false
Name = Warehouse
SessionPoolsCurrentCount = 0
SessionPoolsHighCount = 0
SessionPoolsTotalCount = 0
DestinationsCurrentCount = 0
DestinationsHighCount = 0
DestinationsTotalCount = 0
MessagesCurrentCount = 0
MessagesHighCount = 0
MessagesPendingCount = 0
MessagesReceivedCount = 0
BytesCurrentCount = 0
BytesHighCount = 0
BytesPendingCount = 0
BytesReceivedCount = 0
HealthState = HEALTH_OK,ReasonCode: [
Queue Destination : orderqueue was added to JMSServer : Warehouse !
Name = orderqueue
JNDIName = jms.queue.order
JMSServer = Warehouse
StoreEnabled = default
Type = Queue
BytesMaximum = 1024000
BytesThresholdHigh = 1000000
BytesThresholdLow = 512000
MessagesMaximum = 100000
MessagesThresholdHigh = 90000
MessagesThresholdLow = 1000
Quota = 5
TimeToDeliverOverride = 7200000
Output Error Verbose
Opened C:\jmsml\jmstest.xml
460
462
464
466
468

FIG. 14

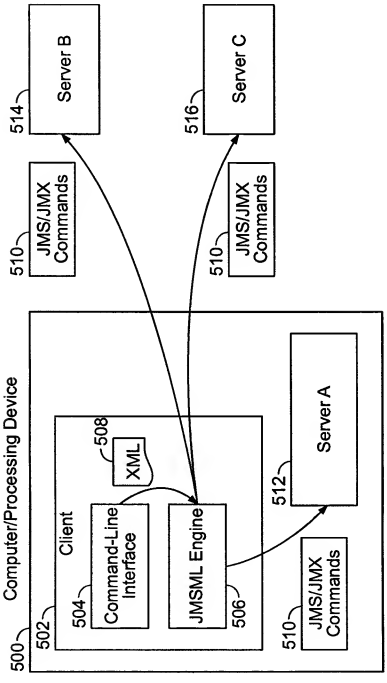
Computer/Processing Device
500
Client
502
Command-Line Interface
504
XML
508
JMSML Engine
506
JMS/JMX Commands
510
Server A
512
JMS/JMX Commands
510
Server B
514
JMS/JMX Commands
510
Server C
516

FIG. 15

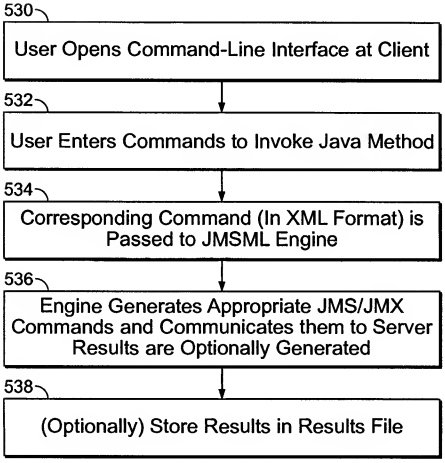
530
User Opens Command-Line Interface at Client
532
User Enters Commands to Invoke Java Method
534
Corresponding Command (In XML Format) is Passed to JMSML Engine
536
Engine Generates Appropriate JMS/JMX Commands and Communicates them to Server Results are Optionally Generated
538
(Optionally) Store Results in Results File

FIG. 16

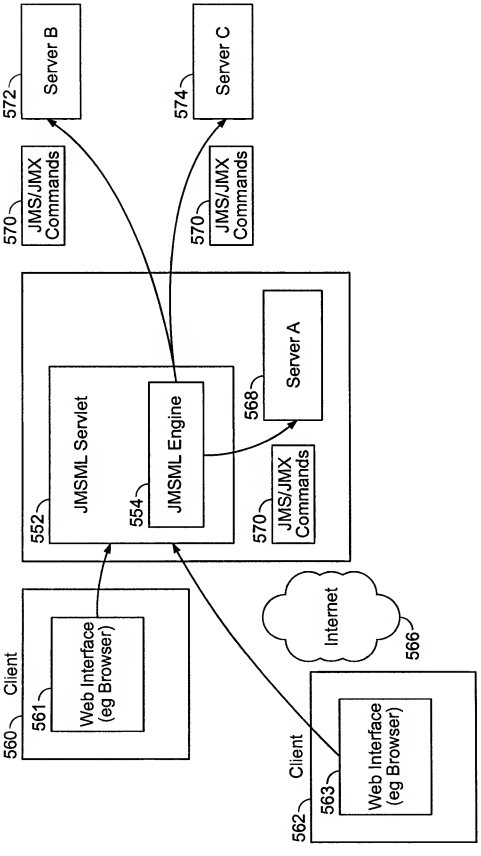
Server B
572
Server C
574
JMS/JMX Commands
570
JMS/JMX Commands
570
JMSML Servlet
552
JMSML Engine
554
Server A
568
JMS/JMX Commands
570
Client
560
Web Interface (eg Browser)
561
Internet
566
Client
562
Web Interface (eg Browser)
563

FIG. 17

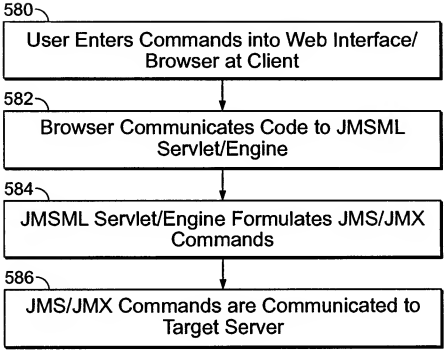
580
User Enters Commands into Web Interface/ Browser at Client
582
Browser Communicates Code to JMSML Servlet/Engine
584
JMSML Servlet/Engine Formulates JMS/JMX Commands
586
JMS/JMX Commands are Communicated to Target Server

FIG. 18

Title: SYSTEM AND METHOD FOR JAVA MESSAGE SERVICE MARK-UP LANGUAGE
Inventors: Kathiravan Sengodan
Application No.: 10/602,037 Filing Date: June 23, 2003
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Attorney: Karl F. Kenna Telephone No. (415) 362-3800

FIG. 19